

In re VANDENBOSSCHE
09/583,583

IN THE CLAIMS

1. (amended) Brush holder (2) for a vehicle alternator having a housing with a bearing (36),
said brush holder (2) comprising:

- an insulating support (4) having an opening (22);
- a heat dissipating means (14, 26) having a metallic seat fixed to the support (4);
- and an electrical circuit comprising a semiconductor control component (12), in which

the seat (14) on the one hand receives for fixing on one of its faces the control component (12) by means of an opening (22) in the support (4) and on the other hand belongs to the heat dissipation means (14, 26) in contact with an ambient environment and arranged so as to receive heat from the control component (12), wherein the seat is separate from the ~~housing~~ bearing (36) and not in contact with said ~~housing~~ bearing (36), said seat is mounted within a thickness of the support (4) and the seat receives on the other of its faces a heat dissipator so that the heat dissipation means (14, 26) is composed of two distinct and adjacent parts,

wherein the dissipator (26) has a coefficient of expansion greater than that of the seat.

2-3. (canceled)

4. (previously amended) Brush holder according to claim 1, wherein the support (4) is moulded onto the seat (14).

In re VANDENBOSSCHE
09/583,583

5. (previously amended) Brush holder according to claim 1, wherein the support (4) is moulded onto the dissipator (14, 26).

6. (previously amended) Brush holder according to claim 1, wherein the dissipator (26) is attached to the support (14).

7. (previously amended) Brush holder according to claim 6, wherein the dissipator (26) is fixed to the support (4) by screws (34).

8. (previously amended) Brush holder according to claim 1, wherein it comprises a heat-conducting layer (30) interposed between the seat (14) and the dissipator.

9. (previously amended) Brush holder according to claim 1, wherein the seat (14) and the dissipator (26) are in direct contact.

10. (previously amended) Brush holder according to claim 9, wherein at least one (14) from amongst the seat (14) and dissipator (26) has projecting reliefs (38) able to enter the material of the other one (26) from amongst a base and dissipator when they are placed in the operating position of the brush holder.

In re VANDENBOSSCHE
09/583,583

11. (previously amended) Brush holder according to claim 1, wherein the dissipator (26) is metallic.

12. (canceled)

13. (previously amended) Vehicle alternator, comprising: a brush holder according to claim 7, at least one of the screws (34) for mounting the dissipator (26) on the support (4) providing the fixing of the brush holder (2) to a housing of the machine, and a thermally insulating element (37) is interposed between the or each screw (34) and the dissipator (36).

In re VANDENBOSSCHE
09/583,583

REMARKS

The Examiner is thanked for the Non-Final Action dated April 08, 2003. The above amendment and remarks to follow are intended to be fully responsive thereto.

The drawings were objected to under 37 CFR 1.83(a) for failing to illustrate every feature of the invention specified in the claims. Applicant has amended the claims to clearly recite that element 36 is a bearing of the machine housing. As explained at page 7 of the original specification, the alternator comprises a housing provided with a front and rear bearing connected together by, for example, screws. Figure 5 shows the housing 3 and bearing 36.

The specification was objected to and claims 1, 3-11 and 13 were rejected for failing to adequately provide a written description for the claims limitation that, "... the seat is separate from the housing and not in contact with said housing..." Applicant has amended this phrase as follows: "... the seat is separate from the ~~housing~~ bearing (36) and not in contact with said ~~housing~~ bearing (36), ...". Applicant respectfully submits that this amendment overcomes the objection to the specification and the rejection under 35 U.S.C. §112, first paragraph.

No new matter has been entered by the foregoing amendment.

In re VANDENBOSSCHE
09/583,583

Claims 1, 3-7, 9 and 11 were rejected under 35 U.S.C. 102(b) as being anticipate by Komurasaki et al. (USP 5,619,108). Claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over Komurasaki et al. '108 in view of Jaeschke (USP 4,469,968). Claim 8 was rejected under 35 U.S.C. 103(a) as being unpatentable over Komurasaki et al. '108 in view of Kato (USP 5,536,972). Claim 13 was rejected under 35 U.S.C. 103(a) as being unpatentable over Komurasaki et al. '108 in view of Nakata, et al. 4,990,811. Applicant respectfully submits that these rejections are traversed in view of the above amendments and the following comments.

Claim 1 requires that the insulating support 4 include an opening 22. Komurasaki et al. '108 fails to disclose an insulating support having an opening.

In Komurasaki et al. '108, a central component 51 of a rectangular parallelepiped controls the voltage generated by a vehicle alternating-current generator (see col. 5, lines 24-27). The central component 51 "contains a hybrid IC 59 on a copper frame 58 and is sealed with epoxy resin." See column 5, lines 27-30. The component 51 is closed and lacks the opening recited in the instant claims.


Furthermore, Komurasaki et al. '108 has a heat sink 24, but the heat sink 24 has an unknown coefficient of expansion. Applicant has amended claim 1 to include the limitation of pending claim 3 whereby "the dissipator (26) has a coefficient of expansion greater than that of the seat." The prior art fails to teach or render obvious this limitation.

Lastly, claim 10 is not taught or rendered obvious by the prior art. In Jaeschke '968, fastening means (rivets) 77 fasten the dissipating member 71 (col. 4, lines 37, 47).

In re VANDENBOSSCHE
09/583,583

Claims 1, 3-11, and 13 are not believed to be in condition for allowance and notice to that effect is earnestly solicited. Should the Examiner believe further discussion regarding the above claim language would expedite prosecution, he is invited to contact the undersigned at the number listed below.

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